

SURFACE-WATER SAMPLING: 4.1 COLLECTION METHODS AT FLOWING-WATER AND STILL-WATER SITES

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The methods used to collect surface-water samples depend not only on flow characteristics of the surface-water body but also on the following considerations: safety of field personnel (NFM 9); nature of streamflow; field-measurement profiles (NFM 6); temporal and spatial heterogeneity; physical setting; ecological characteristics; weather conditions; fluvial-sediment transport; target analytes; point and nonpoint sources of contamination; and study objectives, including data-quality requirements. Each sampling site needs to be examined and sampled in a manner that minimizes bias caused by the collection process and that best represents the environmental conditions at the time of sampling.

The field team should be thoroughly familiar with procedures and requirements described in the *National Field Manual*⁶ and Office of Water Quality Technical Memorandum 99.02⁶ before beginning field work. Standard references that provide descriptions of surface-water sampling techniques include: Federal Inter-Agency Sedimentation Project (1986), Ward and Harr (1990), and Edwards and Glysson (1998). Study requirements for quality control (QC) must be checked and previous QC data examined before field work begins.

- ▶ The field team should review requirements and procedures for collection of equipment blanks, field blanks, concurrent samples, and other relevant QC samples before beginning field work (section 4.3).
- ▶ The field team should be adequately staffed and equipped. For example, additional personnel and equipment are required for collection of concurrently collected samples (concurrent replicate samples, section 4.3).

⁶The technical memorandums referenced in this manual are available on the World Wide Web; see "Selected References and Internal Documents" for memorandum titles, dates, and the Web site address.